

ADSL Modem/Router with Wireless-N

U S E R M A N U A L



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Overview

This User Manual provides instructions for setting up your ADSL Modem/Router, connecting the ADSL Modem/Router to wired and wireless computers or other devices on a network, and securing your network. There are also instructions for setting up the ADSL Modem/Router for gaming.

For most customers, Chapter 1 covers what you need to get connected to the Internet. Chapter 2 applies if you want to set up a network. Chapter 3 explains how to change your Wireless Network's default settings, Chapter 4 focuses on wireless options primarily for advanced users, and Chapter 5 provides what you need for online gaming.

Chapters 6-8 provide advanced information that is primarily for System Administrators. These chapters explain how to use advanced features of the ADSL Modem/Router such as adding extra security with firewall filtering, backing up and restoring the ADSL Modem/Router configuration, updating the ADSL Modem/Router firmware, creating a fixed IP address, monitoring status, and management and diagnostic features of your ADSL Modem/Router.

1

Installation Instructions

This chapter covers the basic instructions needed to install your ADSL Modem/Router and connect to the Internet.

If you already installed and connected your ADSL Modem/Router (by, for instance, using the separate Quick Start), you can skip this chapter and begin with [Chapter 2: Connecting Devices to the ADSL Modem/Router](#) on page 14.

Package Contents

Your package contains the following items:

- Zoom ADSL Modem/Router
- Ethernet cable
- Power cube
- One long phone cord
- For some countries, a splitter to enable you to use a single ADSL wall jack for both an Internet connection and for telephone service. Some splitters ship with a small phone cord attached to the splitter, and others ship with a separate small phone cord.
- Quick Start flyer
- CD with User Manual and Warranty (Some model variations do not include a CD.)

If anything is missing or damaged, please contact Zoom Customer Support (see [Appendix D: Getting Help](#)), or whoever sold you the modem.

Before You Begin

If you received the ADSL Modem/Router from your service provider, read this.

Your service provider may have provided instructions for installing your ADSL Modem/Router. Please follow these instructions. If you need help connecting wireless devices to your ADSL Modem/Router after completing the installation, please see [Chapter 2: Connecting Devices to the ADSL Modem/Router](#).

Some service providers pre-configure the ADSL Modem/Router. In that case, the bottom of your model 5792 may have a large label AND a label, saying something like **Configured for XYZ service**. That label or another small label may also have a Username and Password for your ADSL Internet service.

If you did not receive Model 5792 from your service provider and you are replacing an ADSL modem and ADSL service was working with that modem, read this.

It's important to know whether your ADSL service requires the modem to have a User Name and Password to access and browse the Internet. This User Name and Password are normally different from the User Name and Password used to access a service provider's email or to log in to the modem's Configuration Manager.

- If your ADSL service DOES require a User Name and Password, be sure to write down the ones you've been using. They will be useful when you install your Zoom modem.
- If your ADSL service DOES NOT require a User Name and Password, please be aware that some of these services require you to disconnect your "old" modem for at least 2 hours before installing a new modem including your Zoom modem.

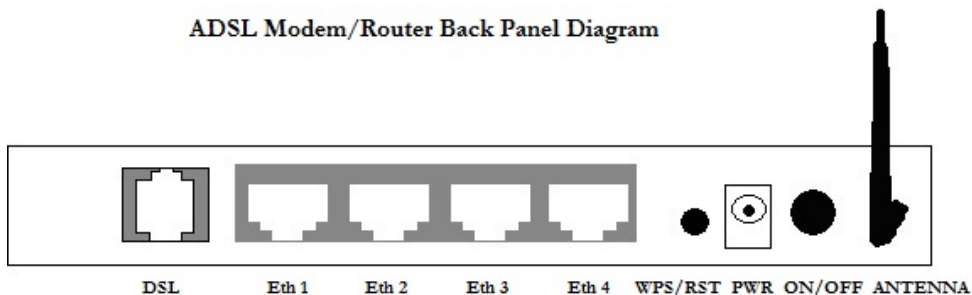
Installing the ADSL Modem/Router

Important! The ADSL Modem/Router should be installed near a phone jack with ADSL service. Ideally it should be located so that it's not too far from any wireless devices that will communicate with the ADSL Modem/Router. Sometimes it's helpful to set up the ADSL Modem/Router at one location, and to then move it to a location that gives better wireless performance.

- 1 You willl connect a computer to Model 5792. First shut down that computer.

- 2 Connect the power adapter to the receptor on the back panel of your ADSL Modem/Router and plug the other end of the power adapter into a wall outlet or power strip.
- 3 If necessary, press the ON/OFF button in on the back panel of your ADSL Modem/Router to power ON the modem.
- 4 Connect an Ethernet cable between any one of the ADSL Modem/Router's ETHERNET ports (labeled ETH 1, 2, 3, or 4) and any of the computer's Ethernet ports. Then turn on the computer. One Ethernet LED on your modem's top panel should turn on.

ADSL Modem/Router Back Panel Diagram



Note: Pressing the Reset button (RST) 8 seconds or more only affects the modem's default IP address (192.168.1.1), User Name (admin) and Password (admin). All other settings remain unchanged.

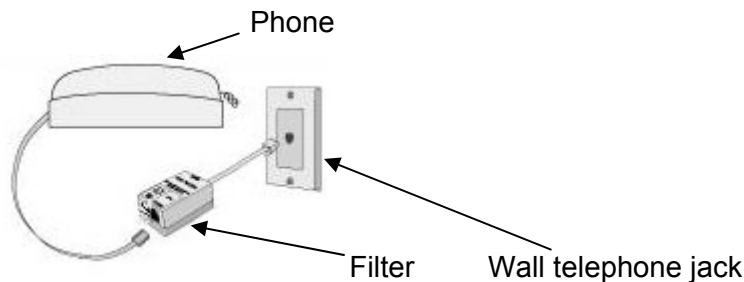
- 5 Connect the supplied phone cord between your modem's **DSL** jack and a phone jack with ADSL service

Note: Many ADSL Modem/Router models include a filter/splitter. This can be used if you want to use a phone near the modem. A filter/splitter or ADSL filter should also be used with phones not located near the modem, to prevent interference between the modem and phone when the phone is off-hook.

Note that the filter/splitter is NOT required if you simply want to plug your modem into a phone jack in the wall, without sharing that jack with a telephone.

To use a filter/splitter with a modem and a phone, connect the filter/splitter's LINE or PHONE LINE jack to a phone jack in the wall, plug the supplied phone cord between your modem's DSL jack and the filter/splitter's MODEM jack, and plug the phone into the filter/splitter's PHONE jack. (Some but not all filter/splitters require you to use a short phone cord to connect the filter/splitter to a phone jack in the wall.)

If you are using a filter/splitter with a phone only and not a modem, connect the filter/splitter's LINE or PHONE LINE jack to a phone jack in the wall, then plug the phone into the filter/splitter's PHONE jack. (Some but not all filter/splitters require you to use a short phone cord to connect the filter/splitter to a phone jack in the wall.)



- 6 After a few seconds, your **DSL** LED will begin blinking, then become solid. If the DSL LED does not become solid, please refer to [Appendix A: Troubleshooting Tips](#)
- 7 What you do next depends on whether you know your VPI/VCI, Encapsulation and Connection Type. Your service provider may have given you these values, or may have put them on a small label on the bottom of your modem/router. If you are replacing an existing modem, you may be able to get them by logging into your existing modem and looking at the setup page.

If you know these values, go to [Configuring your ADSL Modem/Router when you know your VPI/VCI, Encapsulation and Connection Type](#).

If you do not know these values, go to [Configuring your ADSL Modem/Router when you do not know your VPI/VCI, Encapsulation and Connection Type](#).

Configuring your ADSL Modem/Router when you know your VPI/VCI, Encapsulation and Connection Type

- 1 Log into the Zoom Configuration Manager by entering the following in your Web browser's address **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password **in lower case**, then click **OK**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the User Name and Password that your Internet service provider may have given you.)

- 3 Enter the **VPI/VCI**, **Encapsulation**, and **Connection Type** on the home page. If your Connection Type is PPPoE or PPPoA you will also need to enter your username and password. Sometimes the service provider puts these on a small label on the bottom of the unit.
- 4 Click **OK** to save your settings.
- 5 Now check that your installation worked by opening the computer's Web browser and connect to a web site. If you cannot connect to the Web, please refer to [Appendix A: Troubleshooting Tips](#).

Congratulations! Your setup is now complete for a single PC. Please go to [Completing your Installation](#).

Configuring your ADSL Modem/Router when you do not know your VPI/VCI, Encapsulation and Connection Type

- 1 Log into the Zoom Configuration Manager by entering the following in your Web browser's address **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password in **lower case**, then click **OK**.
User Name: **admin**
Password: **admin**

(The User Name and Password entered here are not the same as the User Name and Password that your Internet service provider may have given you.)

- 3 On the home page in the **Country** drop down list please select your country.
- 4 In the **ISP** drop down list please select your ISP. If your ISP has more than one setting and you are unsure what setting your ISP uses select the first setting. You may have to try each setting for your ISP to find the correct one.
- 5 **If your Internet Service Provider is using PPPoE or PPPoA** enter the User Name and Password for your Internet service, then click **OK**. (You should have a **User ID** or **User Name**, which is often your email address or the characters preceding the @ sign in your email address. You should also have a **password**.

The PPPoE or PPPoA User Name and Password are **NOT** the User ID and Password that you used to get into the configuration manager. Sometimes the Username and Password are on a small label on the bottom of your modem/router.)

- 6 Now Now check that your installation worked by opening the computer's Web browser and connect to a web site. If you cannot connect to the Web, please refer to [Appendix A: Troubleshooting Tips](#).

Congratulations! Your setup is now complete for a single PC. Please go to **Completing your Installation**.

Completing your Installation

Now that your ADSL Modem/Router is connected to the Internet, you can connect additional devices to your ADSL Modem/Router or set up some of its advanced features. If you do not need to do either of these steps, than your setup is complete. Enjoy!

- To connect a computer smartphone, tablet, or other device to your ADSL Modem/Router, see [Chapter 2: Connecting Devices to the ADSL Modem/Router](#).
- If you want to change the default **Wireless Network Name(SSID)** or **Wireless Password**, see [Chapter 3: Changing the Default Wireless Settings](#). You may wish to change the default Wireless Network Name or Password if you are replacing an existing modem and all your devices are already configured to use the existing modem's SSID and password.
- In the unlikely event that you want to configure advanced wireless options on your ADSL Modem/Router, please see [Chapter 4: Advanced Wireless Options](#).
- If you are playing a multi-player game over the Internet, you may need to setup the modem in a special way for the game to work. This can be done by setting up a DMZ, virtual server or by using port triggering. Please see [Chapter 5: Online Gaming](#).
- In the unlikely even you want to configure advanced options on your ADSL Modem/Router, please see [Chapter 7: Advanced ADSL Modem/Router Settings](#).

Logging into the Configuration Manager

The Configuration Manager is built into the ADSL Modem/Router and accessed through a web browser. Various chapters in this manual ask you to use the configuration manager.

To Log into the **Zoom Configuration Manager**:

1. Open your Web browser and, in its address bar, type **http://192.168.1.1** and then press the **Enter** key on your keyboard.
2. In the **Login** dialog box, type the following user name and password in lowercase, then click **OK**. (The ADSL Modem/Router **User Name** and **Password** you enter here are not the same as the User Name and Password that your Internet service provider may have given you.)

User Name: **admin**
Password: **admin**

If you are not prompted for a **User Name** and **Password**, do the following in this order: Recheck all connections; restart the modem and computer; and reset the modem by pressing the **RESET** button on the modem's back panel for 7 seconds.

Important:

For security, you may want to choose your own ADSL Modem/Router password after the setup is complete. See [Changing User Names and Passwords](#) on page 62.

Tip!

If you configured the ADSL Modem/Router using a notebook computer, you can keep it plugged in, or you can disconnect it from the unit's ETHERNET port. As long as the ADSL Modem/Router remains plugged into an ADSL wall jack and a power source, the ADSL Modem/Router can function as a stand-alone device. You can then make the notebook part of your wireless network.

2

Connecting Devices to the ADSL Modem/Router

This chapter explains how to connect devices (computers, phones, tablets, game stations, etc.) to the ADSL Modem/Router. These devices can be connected either wirelessly or to one of the Ethernet ports on your ADSL Modem/Router.

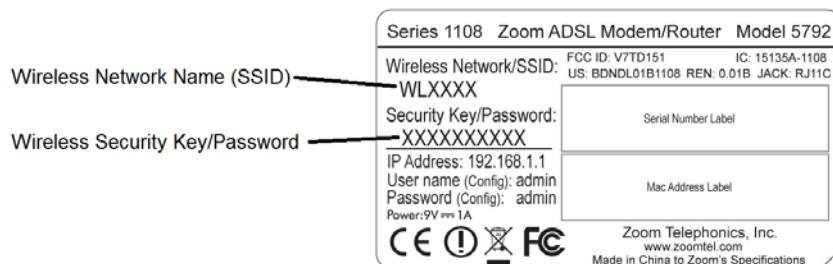
If you are connecting a computer or other device to an Ethernet LAN port of the ADSL Modem/Router, please go to [Connecting Additional Computers and/or Other Devices to the ADSL Modem/Router's Ethernet/LAN ports](#). If you are connecting one or more Wi-Fi compatible devices wirelessly to the ADSL Modem/Router, please continue below.

Connecting Wi-Fi compatible wireless devices to your ADSL Modem/Router.

Your ADSL Modem/Router comes pre-configured with wireless settings as discussed below. These settings are found on your ADSL Modem/Router's bottom label. Most users should simply use these default settings.

- WPA2-PSK/WPA-PSK security is enabled
- A random Wireless Security Key (also called a password or pre-shared key) is assigned. The Security Key/Password is printed on the bottom label of your ADSL Modem/Router.

ADSL Modem Bottom Label:



If you want to change these default settings please see [Chapter 3, Changing the Default Wireless Settings](#) before connecting your wireless computers or devices. You must use compatible wireless settings for each computer or device that you want to wirelessly connect to the ADSL Modem/Router, as described below.

Establishing your Wireless Network

If all the computers or devices on your network support WPS, you can use WPS to easily set up your network. Windows 8.1, 8, and 7 support WPS. Non Windows devices typically have a button called WPS on them if they support WPS. (Note: Apple iPads, iPhones, and Macintosh computers do not support WPS as of July 2014.) Please see [Using WPS to set up your Wireless network](#) if you want to use WPS for wireless connections to your ADSL Modem/Router.

If some of the wireless devices do not support WPS, or if you do not know whether they do support WPS, you can configure each computer or device manually. To do that, select one of the possibilities for that computer or other device below:

- If you have a non-computer **wireless device like an iPhone or other cellular phone, iPad or other tablet, iPod Touch**, etc., see the instructions on page 16 for [Connecting a Wireless-enabled Device to the ADSL Modem/Router](#).
- Many newer **Windows 8.1, 8, 7, Vista, and XP computers have built-in wireless networking** capabilities and do not require the installation of a wireless component. If this is the case, you should set up that computer's wireless connection using the Windows 8.1 or 8, 7, Vista, or XP connect utility. See the sections below on connecting [Windows 8.1 or 8](#) (page 17), [Windows 7](#) (page 18), [Vista](#) (page 18), or [XP](#) (page 20) computers with built-in wireless capabilities.
- If you are using a Macintosh computer see the instructions on page 20 for [Connecting a Macintosh OS X Computer with Built-in Wireless Capabilities](#).
- Some older Windows computers may have **built-in wireless networking** capabilities, but do not use the Windows 8, 7, Vista, or XP utility to configure wireless networking. If this is so, set up your computer's wireless connection using the instructions on page 22 for [Connecting a Computer with a wireless adapter to the ADSL Modem/Router](#).
- Some **computers** may need a **wireless network adapter installed**. This can be a USB adapter, PC Card adapter, or PCI adapter. When you install the adapter, make sure that it is set to **infrastructure** or **access point** mode (NOT **ad-hoc** or **peer-to-peer** mode). If you need help installing your wireless adapter or setting its mode, refer to the documentation that came with it. After you install the adapter, see the instructions on page 22 for [Connecting a Computer with a wireless adapter to the ADSL Modem/Router](#).

[Router.](#)

Connecting a Wireless-enabled Device (including the iPhone or other cellular phones, iPad or other tablets, the iPod Touch, etc.) to the ADSL Modem/Router

- 1 Select the wireless-enabled device that you want to add to the network. The device should have software that will let it perform a **site search** to scan for available wireless networks in your area. You may have to click on something like **Settings** and then **Wi-Fi**. When the list of available wireless networks appears, click on **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the SSID from the default, select your new SSID.
- 2 When prompted for the wireless password, enter your Wireless Security Key/Password and click **Connect** or **Join**. Your Security Key/Password can be found on the bottom label of your ADSL Modem/Router.

Tip!

If you need help, refer to the documentation that came with your wireless device.

- 3 Test your wireless connection. Open your device's Web browser (for instance, Internet Explorer, Firefox, or Chrome) and try to connect to a familiar Web address. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your device is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 On your wireless device or computer, find the wireless network connection option (similar to the process of adding your device or computer to the network).
- 2 Select or click on **Disconnect**, **Forget**, **Forget this network** or similarly-named button. In doing this, you may need to select your Wireless Network Name(SSID).

Connecting a Windows 8.1 or Windows 8 Computer with Built-in Wireless Capabilities

- 1 On the desktop, click the **Wireless Network Icon**  in your computer's notification area.
- 2 Typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 3 Click **Connect**. If you want to connect to this network automatically in the future, check the **Connect Automatically** checkbox.
- 4 When prompted to enter your Network Security Key, enter your Wireless Security Key/Password and click **Next**. Your Wireless Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 5 When asked "Do you want to turn on sharing between PCs and connect to devices on this network?" Click **Yes** to enable sharing and **No** to disable sharing. Sharing sets up your firewall to allow other users on your network to share files, folders or devices such as printers. Most users should select **Yes**. If you know you don't want to share files or devices, select **No**.
- 6 Test your wireless connection. Open your computer's Web browser and try to connect to a familiar Website. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your computer is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current wireless network:

- 1 Left-click the wireless network icon in the notification area of the Windows taskbar.
- 2 Left-click your Wireless Network Name(SSID) and select **Disconnect**.

Connecting a Windows 7 Computer with Built-in Wireless Capabilities

- 1 Click the **Wireless Network Configuration** utility icon  in your computer's system tray.
- 2 Typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 3 Click **Connect**. If you want to connect to this network automatically in the future, check the **Connect Automatically** checkbox.
- 4 When prompted to enter your Network Security Key, enter your Wireless Security Key/Password and click **Next**. Your Wireless Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 5 Test your wireless connection. Open your computer's Web browser and try to connect to a familiar Website. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#)

Your computer is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 Right-click the wireless network icon in the notification area of the Windows taskbar.
- 2 Left-click your Wireless Network Name(SSID) and select **Disconnect**.

Connecting a Windows Vista Computer with Built-in Wireless Capabilities

- 1 From the **Start** menu select **Connect to**.

- 2 In the **Connect to a network** dialog box, typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 3 Click **Connect**. If you want to connect to this network automatically in the future, check the **Connect Automatically** checkbox.
- 4 When prompted to enter your Network Security Key, enter your Wireless Security Key/Password and click **Next**. Your Wireless Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 5 In the **Successfully connected to [desired network]** dialog box, you have three options. You can:
 - Select **Save the network** and **Start this connection automatically** if you always want to connect to the same network. Then click **Close**. The next time you start your computer, you will automatically connect to the selected network.
 - Select **Save the network** and clear the **Start this connection automatically** check box if you don't want to *automatically* connect to this network every time you start your computer but you will want to *sometimes* connect to this wireless network in the future. Click **Close** to display the **Select a location . . .** dialog box where you choose a location. Windows Vista automatically applies the correct network security settings. If the **User Account Control** dialog box appears, click **Continue**.
 - Click **Close** to complete the connection procedure. Select this option if you are connecting to this network only one time.
- 5 Test your wireless connection. Open your computer's Web browser and try to connect to a familiar Website. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your computer is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 From the **Start** menu, select **Connect to**.
- 2 In the **Disconnect or Connect to another network** dialog box, select the current network and click **Disconnect**.
- 3 In the **Are You Sure?** message box, click **Disconnect** again.

- 4 In the next dialog box, you can connect to another network or click **Close** to complete the disconnect procedure.

Connecting a Windows XP Computer with Built-in Wireless Capabilities

- 1 On your Windows desktop, click the **Wireless Network Icon** in the System Tray.
- 2 Typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 3 Click **Connect**. If you want to connect to this network automatically in the future, check the **Connect Automatically** checkbox.
- 4 When prompted to enter your Network Security Key, enter your Wireless Security Key/Password and click **Next**. Your Wireless Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 5 Test your wireless connection. Open your computer's Web browser and try to connect to a familiar Website. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your computer is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 On your Windows desktop, click the **Wireless Network Icon** in the System Tray.
- 2 Click **View Wireless Networks** button.
- 3 Click your Wireless Network Name(SSID) and select **Disconnect**.

Connecting a Macintosh OS X Computer with Built-in Wireless Capabilities

- 1 Click the Wi-Fi icon in the menu bar. If the Wi-Fi icon does not appear on your menu bar, please refer to your built-in Macintosh documentation for how to enable wireless.



Note: On versions prior to OS 10.7 the **Wi-Fi** icon is called **AirPort**.

- 2 Typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 3 When prompted for the password in the next dialog box, enter your Wireless Security Key/Password and click **Next**. Your Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 4 Test your wireless connection. Open your computer's Web browser and try to connect to a familiar Website. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your computer is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 Click the Wi-Fi icon on the menu bar.
- 2 Select **Turn Wi-Fi Off** (OS 10.7 or later) or **Turn AirPort Off** (OS versions prior to 10.7) to disconnect from the router.

Connecting a Computer with a Wireless adapter to the ADSL Modem/Router

- 1 Go to the computer that is set up with a wireless adapter that you want to add to the network. For many wireless adapters, you will use their configuration manager software and click a **Scan** button or select a **Site Scan**, **Scan Networks**, or other similarly named tab to do a site search. When the list of available wireless networks appears, you typically click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.

If you need help, refer to the documentation that came with your wireless adapter.

Note for Windows 8, 7, Vista and XP users: If you installed a wireless adapter on a Windows 8, 7, Vista or XP computer, Windows may try to automatically configure the adapter (rather than let you use the software provided with the wireless adapter). You will know this is happening because you will be prompted with a message about one or more wireless networks being available. You will also be able to click a link to open the **Wireless Network Connection Properties** dialog box. If this happens, click the link, clear the **Use Windows to configure my wireless network settings** check box, and then click **OK**. You can then use the software provided with your wireless adapter without interruption from Windows.

- 2 When prompted to enter your Network Security Key, enter your Wireless Security Key/Password and click **Next**. Your Wireless Security Key/Password can be found on the bottom label of your ADSL Modem/Router.
- 3 Test your wireless connection. Open your device's Web browser (for instance, Internet Explorer, Firefox, or Chrome) and try to connect to a familiar Web address. If you are unable to connect, make sure you followed the instructions. If you did, please see [Appendix A: Troubleshooting Tips](#).

Your device is now connected to your wireless network. If you want to connect additional computers or devices, follow the instructions for your device by starting at the first page of this chapter.

To disconnect from the current network:

- 1 On your computer that has a wireless adapter, find the wireless network connection option (similar to the process of adding your computer to the network).
- 2 Click or highlight the router's Wireless Security Name.
- 3 Select or click on **Disconnect** or similarly-named button.

Using WPS as an alternative way to set up your Wireless Network

If all the Wi-Fi compatible wireless devices on your network support WPS, you can choose to quickly setup your wireless network by pushing a button on your ADSL modem/router and on each wireless device connecting to your ADSL modem/router.

Windows 8.1, Windows 8 and Windows 7 users should follow the instructions below: Other computers or devices such as tablets should go to [If you are using a non Windows computer or other device that supports WPS](#).

If you are using a Windows 8.1, 8, or 7 computer:

- 1 Open **Connect to a Network** on that computer by right-clicking the network icon in the notification area of the Windows taskbar.
- 2 A list of available networks is displayed.
- 3 Typically you then click **WLxxxxxx** where xxxxxx is 6 random alpha-numeric characters. **WLxxxxxx** is the Wireless Network Name(SSID) printed on the bottom label of your ADSL Modem/Router. In the unlikely event that you changed the Wireless Network Name from the default, select your new Wireless Network Name.
- 4 You will see a screen with a text box for the Security key. If WPS configuration is supported, you may see a message such as *You can also connect by pushing the button on the router*. If you see this message, continue at step 5 below.



- 5 Press the Wi-Fi Protected Setup (WPS) button on the router for 2 seconds. (You do not need to type a security key or passphrase in the Security key text box on your Windows machine). The ADSL Modem/Router will automatically set up the computer to connect to the network and apply the network's security settings. Then click **OK** on the computer's **Connect to a Network** dialog box.

Repeat steps 1-5 above for each Windows computer you want to connect to the ADSL Modem/Router. If you want to connect a non Windows computer or another device such as a tablet, follow the instructions below.

If you are using a non Windows computer or other device that supports WPS

Please refer to the instructions for your device for more information on using WPS. The directions below should work for most users.

- 1 Press the **WPS** button on the router for 2 seconds. The WPS LED should blink green.
- 2 Within 2 minutes (before the WPS LED light turns off), press the WPS button on the device that you're linking wirelessly to the modem/router. The button may be a physical pushbutton on the device or a button on a page of the device's wireless network configuration menus.
- 3 Congratulations! You should now have a secure connection between your ADSL Modem/Router and a device. Now is a good time to check that your device's Internet connection is working. Open your browser and go to a familiar Web site. If you are able to connect, continue with the next step below.
If you are not able to connect to the Internet, please see [Appendix A: Troubleshooting Tips](#).
- 4 If you have other devices whose WPS security you need to set, repeat steps 1 through 3 for each device. When they are finished, the basic setup for these local wireless devices should be complete.

Connecting Additional Computers and/or Other Devices to the ADSL Modem/Router's Ethernet/LAN ports

You can plug up to four computers, game consoles, or other Ethernet-capable devices into the ADSL Modem/Router's LAN ports. For information about your specific device, please refer to the documentation that came with that device. Follow the instructions below for each computer or other device.

- 1 If you connected the ADSL Modem/Router to a computer using a wired connection when setting up the ADSL Modem/Router, unplug the computer now if you don't want that computer to stay connected to the ADSL Modem/Router.
- 2 To connect a computer or other Ethernet-capable device, plug one end of an Ethernet cable into an available Ethernet (LAN 1, 2, 3, or 4) port on the ADSL Modem/Router and plug the other end of the Ethernet cable into the Ethernet port of the additional device you want to connect to the ADSL Modem/Router. (If you are connecting a hub or a switch, this is typically called an Uplink or Expansion port.) **If you are connecting a computer or game station, go to step 5 of this section.**
- 3 If you are connecting a network device such as a switching hub, use the instructions that came with that device. Then reboot any computer that is part of your network. For example, if you connected a switching hub, reboot any computer that will be connected to that switching hub.
- 4 If you are connecting a HomePlug adapter pair with one adapter plugged into the ADSL Modem/Router and an AC outlet, and the other adapter plugged into a computer, game station, or other device and an AC outlet, make those connections and then go to step 5.
- 5 Verify that your Internet connection is working. Open a Web browser on each computer that's using your network and try to connect to a familiar Web address.
- 6 Congratulations! You have connected an additional device to the Internet. You can connect up to 4 Ethernet-capable devices to the ADSL Modem/Router, following the instructions above for each device by starting at step 2 of this section.

3

Changing the Default Wireless Settings

*Your ADSL Modem/Router comes from the factory with a default Wireless Network Name(SSID), **WPA-PSK/WPA2-PSK** wireless security set and a random Wireless Security Key (Wireless Password). These default settings for your router are listed on the bottom label of your unit. Most users can go ahead and use the default settings.*

You may want to change your wireless settings if the wireless devices on your network are already configured to use an existing wireless network name and password. Instead of having to reconfigure all the devices on your network, you can change the ADSL Modem/Router to match the existing settings used by your devices. Read this chapter if you want to use another wireless security mode, or if you want to change either the Wireless Network Name or Wireless Security Key. If you want to use the default wireless settings, you can skip this chapter.

About Wireless Security

There are two basic wireless security modes, WPA and WEP. There are two versions of WPA: WPA and WPA2. When configured as part of a typical home or small office network, WPA and WPA2 require a Wireless Security Key. These modes are typically called WPA-PSK and WPA2-PSK, respectively, though sometimes they're just called WPA and WPA2. You can enable either WPA-PSK or WPA2-PSK alone, or you can enable both WPA-PSK and WPA2-PSK together. By default, your ADSL Modem/Router has both WPA-PSK and WPA2-PSK enabled. You will only need to change the security mode if you know that you have a device you are connecting to that only supports WEP. If you have a device that only supports WEP, go to [Setting up Security using WEP](#). In the unlikely event that you want an unsecured network, this is discussed late in this chapter in [Disabling Security](#).

Note: If you have a Radius Server (very unlikely for a home network), select the WPA/WPA2 options without PSK. All instances of WPA and/or WPA2 that follow refer to WPA-PSK and/or WPA2-PSK unless noted otherwise.

You can check to see if all other clients that you plan to put on the network support WPA or WPA2. You can do this by checking the manual that came with each device or by checking the configuration software for the installed device. Look under **Security** or **Encryption** or **Setup** or **Advanced Features**. Most devices will support one of these modes.

- To change the Wireless Network Name (SSID) or Wireless Security Key used by your ADSL Modem/Router go to [Changing your Wireless Network Name\(SSID\) and Wireless Security Key](#).
- If any of the devices you want to connect to your wireless network do not support WPA or WPA2, go to [Setting Up Security Using WEP](#).

If you need to set up an unsecured network, see [Disabling Security](#)

Changing your Wireless Network Name(SSID) and Wireless Security Key

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 In the **Wireless Network Name** field on the home page, assign a new name to your wireless network. This is the name that all your wireless devices will connect to.
- 4 In the **Wireless Security Key** field, enter a password of your choice (a minimum of 8 characters). Write down this password and put it where you can find it – on the bottom of the ADSL Modem/Router case, for instance.
- 5 Click **OK**.

- 6 Now you need to set up each of your wireless devices with the Wireless Network Name(SSID) and Wireless Security Key. See [Chapter 2, Connecting Devices to the ADSL Modem/Router](#) for help on connecting your wireless computers and devices.

Your security setup configuration is now complete!

Setting Up Security Using WEP

If **any** of your network devices DOES NOT support WPA or WPA2, you can use WEP to configure network security. WEP can be configured two ways: 64-bit and 128-bit. 128-bit WEP provides more security than 64-bit.

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 Click **Advanced** on the right side of the home page.
- 4 Next click **Wireless** then **Security** on the left-side menu.
- 5 From the **Network Authentication** drop-down menu, select **Open** or **Shared**. (Most users should select **WEP Open**; however some older Apple Macbooks require **WEP Shared**.)
- 6 From the **WEP Encryption** drop-down menu, select **Enabled**.
- 7 For **Encryption Strength** select **128-bit** or **64-bit**. (The **128-bit** option is more secure but **64-bit** may be faster on older devices. We recommend setting **64-bit** security.)
- 8 For **Network Key 1**, enter your WEP Key. (Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys. Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys.)
- 9 Click **Apply/Save**.

- 10 Now you need to set up each of your wireless devices with the SSID and passphrase. See [Chapter 2, Connecting Devices to the ADSL Modem/Router](#) for help on connecting your wireless computers and devices.

Your security setup configuration is now complete!

Disabling Security

If for some reason you need to set up an unsecured network, you will need to disable the default security that is currently set up for your ADSL Modem/Router. Follow the instructions below.

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 Click **Advanced** on the right side of the home page.
- 4 Next click **Wireless** then **Security** on the left-side menu.
- 5 From the **Network Authentication** drop-down menu, select **Open**.
- 6 Click **Apply/Save**.

That's it! You have now disabled security.

Now you will need to connect all your wireless devices to the ADSL Modem/Router. See [Chapter 2, Connecting Devices to the ADSL Modem/Router](#) for details on connecting different wireless devices to your network.

WPS Configuration

You can automatically configure WPS security using the router's built-in WPS configuration program on each client device that is part of your wireless network. The ADSL Modem/Router supports Push Button WPS configuration. This button can be either a physical button on the unit or a software button in its application.

Note: WPS configures one client device at a time. Please repeat the configuration method for each client on your wireless network that supports WPS security.

- 1 Press the **WPS** button on your ADSL Modem/Router and hold it in for two (2) seconds. After you release the button, the **WPS** light on the front of the ADSL Modem/Router should start to blink.

Important! The **Registrar** (the device configuring the WLAN,) goes into the WPS mode and the **Enrollee** (the device joining the WLAN) then looks for it. You should always start the **Registrar** first. The ADSL Modem/Router is configured as a **Registrar**, so you should put it into WPS mode first.

- 2 Click or press the **WPS** button on the client device. This button may be a physical button on the unit or a software button in its application.
- 3 Refer to your client device's documentation for further instructions, if necessary.

For each device that you used WPS to enable security and connect to the ADSL Modem/Router, test your Internet connection by opening your Web browser (for instance, Internet Explorer, Firefox, or Chrome) and try to connect to a familiar Web address.

If you connect successfully, you are ready to browse the Web!

If it fails to connect, refer to [Appendix A: Troubleshooting Tips](#) on page 64.

You are now ready to start using your ADSL Modem/Router. If you want additional information on how to use your ADSL Modem/Router, you may choose to continue with:

- In the unlikely event that you want to configure advanced wireless options on your ADSL Modem/Router, please see [Chapter 4: Advanced Wireless Options](#).
- If you are playing a multi-player game over the Internet, you may need to setup the modem in a special way for the game to work. This can be done by setting up a DMZ, virtual server or by using port triggering. Please see [Chapter 5: Online Gaming](#).

- In the unlikely even you want to configure advanced options on your ADSL Modem/Router, please see [Chapter 7: Advanced ADSL Modem/Router Settings](#). DSL Modem/Router. (Most users will not need to change advanced features.)

If you do not need to do either of these steps, than your setup is complete. Enjoy!

4

Advanced Wireless Options

This chapter is primarily for technically advanced users. For most people, the options that are set by default when the ADSL Modem/Router is installed are sufficient.

The information in this chapter applies to you if:

- *You want to set up a guest wireless network that provides limited access to your network.*
- *You want to turn off or hide your wireless network.*
- *You want to enable MAC Filtering to prevent a device on your network from accessing the network, or as an added layer of security to only allow devices that you specify to access your network.*
- *You want to set up the ADSL Modem/Router to work with wireless repeaters to extend the range of your network.*
- *You want to view the wireless devices that are connected to your network.*

To configure wireless features, you need to log into the **Zoom Configuration Manager** to access the wireless configuration pages. Follow the instructions below:

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: <http://192.168.1.1>
- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 Click **Advanced** on the right side of the home page.

4 Next click **Wireless** on the left-side menu.

The table below summarizes the settings available in the wireless menu.

This link...	Opens a page that lets you...
Basic	Configure basic features of the wireless LAN interface. On this page you can change the name of your wireless network, turn off or hide your wireless network. or set up a guest network.
Security	Configure security features of the Wireless LAN interface. Please see Chapter 3: Changing the Default Wireless Settings for more information on changing wireless security.
MAC Filtering	Configure wireless MAC filtering to block Internet access.
Wireless Bridge	Configure the Wireless Bridge feature of the wireless LAN interface.
Advanced	Configure the advanced features of the wireless LAN interface. Most users do not need to change these settings.
Client Info	Shows authenticated wireless clients and their status.

Basic Setup

The table below explains the **Wireless Basic** settings:

This setting...	Lets you specify...
Enable Wireless	A check mark in the Enable Wireless check box shows that your wireless network is up. Uncheck this box to turn off wireless on your ADSL Modem/Router.
Hide Access Point	Click in the check box if you do not want to broadcast the Wireless Network Name(SSID) of your network.
Client Isolation	Enabling client isolation will prevent wireless clients on the same network from communicating with each other. Typically, this feature is used in public hotspots or corporate environments.
Disable WMM Advertise	WMM is used to give wireless data different levels of priority. You can disable WMM to give all users equal priority.
Enable WMF	Allows you to enable Wireless Multicast Forwarding (WMF).
SSID (Wireless Network Name)	The Service Set Identifier for your wireless network. By default, the SSID for the ADSL Modem/Router is WLxxxxxx (where xxxxxx is 6 random alpha numeric characters.) You can change the SSID to any name that you want. The default Wireless Network Name is printed on the bottom label of your ADSL Modem/Router.
BSSID (Broadcast SSID)	Shows the Wireless MAC address of your ADSL Modem/Router.
Country	Select your country from the drop-down menu.

Channel	The default setting for the router is Auto. This allows the router to automatically select the channel with the least amount of wireless interference. Most users should use this settings.
Max Clients	Up to 16 wireless clients are allowed on each network.

Setting up a Wireless Guest Network

A wireless guest network can be set up so you can give visitors access to the Internet without giving them access to other computers on your network.

To setup a Wireless Guest Network:

1. On the **Wireless** from the left-side menu to take you to the Wireless Basic Setup page.
2. Click the **Enabled** check box to enable the Guest wireless network.
3. Enter a name for your guest network in the SSID field.

TIP: You may want to include the word guest in the name so users know it is a guest network. For example, **MyCompany Guest**

The table explains the following settings for your Wireless Guest Network:

This setting...	Lets you specify...
Hidden	Click in the check box if you do not want to broadcast the SSID of your network.
Isolate Clients	Enabling client isolation will prevent wireless clients on the same network from communicating with each other. Typically this feature would be used on a guest network..
Disable WMM Advertise	WMM is used to give wireless data different levels of priority. You can disable WMM to give all users equal priority.
Enable WMF	Allows you to enable Wireless Multicast Forwarding (WMF).
Max Clients	Up to 16 wireless clients are allowed on

	each network.
BSSID	Reports the wireless MAC Address

Wireless MAC Filtering

Most users will not need this feature. However, if there is a PC or other device on the network that you don't want using the Internet, you can use MAC address filtering to deny the device Internet access. (That computer or device will still be able to communicate with other devices on the LAN, such as printers.) You can also use Wireless MAC filtering to add a layer of security, setting up the ADSL Modem/Router to only allow the MAC addresses of your wireless devices to access the Internet.

To set up **MAC Filtering**, click **Wireless** on the left-side menu of the Zoom Configuration Manager. Then click **MAC Filtering**. Follow the instructions below:

- 1 From the **Select SSID** drop-down menu, select the wireless network that you wish to setup MAC Filtering.
- 2 For the **MAC Restrict Mode**, select **Allow** to allow only the MAC address entered to access your network. Select **Deny** to block the MAC addresses you enter from accessing your network. **Disabled** will disable MAC address filtering; this allows you to turn it on and off.
- 3 Click **Add** to add the MAC address to filter. To see the MAC address of clients that are currently connected to the ADSL Modem/Router, click on **Client Info** on the left-side menu..
- 4 Click **Apply/Save** changes after you finish adding wireless clients.
- 5 If you want to remove any of the settings, click the check box next to **Remove**, and then click the **Remove** button.

5

Online Gaming

If you are using your router for gaming, you may need to make changes to the router's firewall setting for the game to work. This is done by setting up a DMZ or virtual server, or by using port triggering so that the modem's firewall won't block the other players from your system during your gaming. The main difference between the three methods is the amount of access someone has to your system.

A virtual server will allow access to your computer or gaming station on certain ports. A port is a channel that is used by applications (such as games) for communication. For example, the directions for the game you want to play over the Internet might tell you to open up port 6000.

Port triggering works by sensing when data is sent out on the predetermined outgoing port and then automatically opening up the corresponding incoming port(s). It will automatically forward the traffic on the incoming port to the computer that accessed the outgoing port. If your game uses one port to send outgoing data and a different port (or ports) for incoming data, you may want to use port triggering. The advantage of port triggering is that it is more secure than setting up a virtual server since the incoming port is only open when you are using it, and since it tracks which computer sent the outgoing data. Port triggering can also be easier to set up because you do not need to know the IP address of your gaming station. The disadvantage of port triggering is that only one host can be accessing the port at one time; so if you have two computers or game stations playing the same game on your network, you will need to use a virtual server or DMZ.

A DMZ differs from a virtual server in that it allows access on all ports of the computer. Because of this, DMZs are less secure and should be used with caution on your computer. However DMZs work well with your gaming stations since security is not as much of an issue for gaming stations as it is for computers.

Once you've decided what type of security to use for gaming, you can set up that security using the appropriate section of this manual:

- **Virtual Server:** For instructions on how to set up a virtual server, please refer to [Creating a Virtual Server](#) on page 50.
- **DMZ:** For instructions on how to set up a DMZ, please refer to [Setting up a DMZ](#) on page 51.
- **Port Triggering:** For instructions on how to set up port triggering, please refer to [Using Port Triggering](#) on page 51.

6

Status Monitoring

This chapter discusses how to check the status of your modem and its ADSL connection.

Most users can skip this chapter, as it is primarily for advanced users and for those who are instructed by their Internet service provider or Zoom Technical Support to verify settings, usually for troubleshooting. If you skip this section, you should go to [Chapter 7](#).

Why Monitor Status?

The ADSL Modem/Router provides easy-to-read screens for you to review the status of the modem and its ADSL connection.

While most users will probably never need to check the status, there are some cases in which it would be helpful. For example, you may need to know the IP address assigned to you by your Internet service provider.

For advanced users with special configuration needs, the status information is useful for overall system maintenance.

Monitoring ADSL Status

If you want to check the status of your ADSL connection, click on the **Device Info** link on the left pane in the **Zoom Configuration Manager**. (If you forgot how to log in to the [Zoom Configuration Manager](#), see page 12.)

The **Device Info** page provides information about your ADSL connection. For example, you can verify whether your ADSL connection is active or not. You can also monitor related ADSL parameters—for example, how fast the ADSL Modem/Router is

transferring data (**Downstream Speed** and **Upstream Speed**), your WAN settings, your LAN settings, and so forth.

Note:

The **Status** page does not provide a way to change any of these settings—see [Chapter 7: Advanced ADSL Modem/Router Setup Options](#), if you need to make changes to these settings.

7

Advanced ADSL Modem/Router Setup Options

Advanced Setup is primarily for technically advanced users. For most people, the options that are set by default when the ADSL Modem/Router is installed are sufficient.

*However, those who want or need to change the ADSL Modem/Router settings can do so using the **Advanced Setup** page in the **Zoom Configuration Manager**. This chapter explains the advanced options and features of the ADSL Modem/Router and how to apply them to your network.*

The information in this chapter applies to you if:

- *Your Internet service provider instructs you to enable, disable, or change the default settings for your ADSL Modem/Router*
- *You need to change your Wide Area Network settings*
- *You want to change the default firewall settings to block particular IP addresses and intrusive hosts*
- *You wish to set up a DMZ, Virtual Server or Port Triggering for online gaming.*
- *You wish to control the hours that a user on your network can access the Internet.*
- *You want to set up fixed IP addresses for your computer(s)*

Viewing the Advanced Setup Options

To configure advanced features, you need to log into the **Zoom Configuration Manager**. Follow the instructions below:

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: **http://192.168.1.1**

- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 Click **Advanced** on the right side of the home page.
- 4 Next click **Advanced Setup** on the left-side menu.

The table below summarizes the settings available in the advanced menu.

This link...	Opens a page that lets you...
ATM Interface	Used to set up multiple ATM channels. Most users will only do this if instructed by their service provider.
ETH Interface	Used to set one of the Ethernet ports as the WAN Interface. Most users will only do this if instructed by their service provider.
WAN Service	Specify how the Wide Area Network (WAN) ADSL setup is configured. Some of the values need to be supplied by your ISP/DSL provider.
LAN	Specify the LAN settings that control the connection between the ADSL Modem/Router modem and your computer.
IPv6 Autoconfig	Allows you to set up IPv6 parameters.
NAT	Virtual Servers Setup page: To direct incoming traffic from the WAN side. A maximum of 32 entries can be configured. Port Triggering: To dynamically open up ports in the firewall when an application on the LAN initiates a TCP/UDP connection to the remote application using a 'Triggering Port'. A maximum of 32 entries can be configured. DMZ Host: To forward IP packets from the WAN that do

	not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer.
Security→ IP Filtering	Outgoing: To block selected IP traffic by setting up filters. Incoming: To accept selected IP traffic by setting up filters (when the firewall is enabled).
Security→ MAC Filtering	Allows you to block access to the Internet based on a device's MAC address.
Parental Control→ Time Restriction	Allows control of when certain computers or devices are allowed to access the Internet.
Parental Control→ URL Filtering	To choose particular URLs to be excluded or included by setting up a URL list. A maximum of 100 entries can be configured.
QoS (Quality of Service)	This lets you assure better performance for gaming and VoIP. Queue Management Configuration: Allows you to automatically mark incoming traffic without reference to a particular classifier. Queue Configuration: Allows you to configure a maximum of 24 entries. QoS Class: Allows you to configure network traffic classes.
Routing	Default Gateway: Set up the routes on which you want the ADSL Modem/Router to send data that it receives on a particular interface, such as a LAN or Ethernet interface. Static Route: Routes specify the IP address of the next device, interface, or Internet destination to forward data to, based on the ultimate destination of the data. A maximum of 32 routes can be configured. RIP: Sets the ADSL Modem/Router to use Routing Information Protocol (RIP) . Most users will not set this.
DNS	DNS Server: Allows you to specify multiple DNS servers. Typically, most users do not need to enter a DNS server

	unless instructed by their ISP. Dynamic DNS: Allows you to map a dynamic IP address to a static address allowing your DSL router to be more easily accessed from various locations on the Internet. Typically used to host a website behind your router without paying for a static IP address.
DSL	To set DSL settings. Modulation and capability can be selected from lists on this page. DSL Advanced Settings can also be found on this page.
UPnP	Allows you to enable/disable UPnP. UPnP allows other UPnP software or devices to work together without user intervention. The default setting for UpnP is Enabled .
DNS Proxy	When Enabled (default setting), attached LAN devices performing DHCP release/renew will have the router's LAN IP assigned as the DNS Server and the ADSL Modem/Router acts as a DNS Proxy. When Disabled, the ADSL Modem/Router no longer acts as a Proxy and assigns to LAN DHCP devices it's own DNS servers that it uses (can be used if the servers are down and you want to put in your own DNS).
Interface Grouping	To create mapping groups with appropriate LAN and WAN interfaces to set up groups that perform as independent networks (utilizing multiple ports to PVC and bridging groups).
IPSec	To add, edit, or remove IPSec tunnel mode connections.
SIP	Allows you to enable or disable the SIP ALG. If you are using your router for VoIP calls and are having problems with the calls try disabling the SIP ALG.
IP Tunnel	Allows you to setup either a IPv6 in IPv4 tunnel or a IPv4 in IPv6 tunnel.
Certificate	Local: To add, view, or remove local certificates used by peers to verify your identity. A maximum of 4 certificates can be stored. Trusted CA (Certificate Authority): Add, view, or remove CA certificates used by you to verify peers' certificates. A maximum of 4 certificates can be stored.

Multicast	Sets up IGMP protocol. Most users will only do this if instructed by their service provider.
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Changing Your ATM Interface

The **ATM Interface** page of the ADSL Modem/Router Configuration Manager is used to setup an ATM interface for your DSL connection. To set up a DSL connection you first setup the **ATM interface**, and then you configure the **WAN Service** for the ATM interface. Most users should use the Home page to setup their DSL connections, the Home page sets up both the ATM and WAN layers at the same time. In the rare case that you need to setup your ATM and WAN layers separately, first go to the **ATM Interface** page, on the left hand menu click **Advanced Setup** then click **Layer 2 Interface** then **ATM Interface**. After you configure your **ATM Interface** you will then setup the **WAN Service** for this interface.

To Add a New Configuration:

If you want to add a new configuration from this page, start by clicking **Add**. Most users should only add a new configuration if they were instructed by their service provider to do so.

The following table describes the settings on the **ATM Interface** page and the values that you can enter.

Setting	Description
VPI	Virtual Path Identifier ranges from 0 – 256. Your DSL provider supplies the VPI when you sign up for ADSL service.
VCI	Virtual Circuit Identifier ranges from 0 – 65536. Your DSL provider supplies the VCI when you sign up for ADSL service.
DSL Latency	Your ISP may ask you to change to Interleaved if you are experiencing errors on your line.
DSL Link Type	This is the type of WAN connection that you will be configuring.
Encapsulation Mode	Most users should not change this setting. It will automatically be set depending on the DSL Link type.

Service Category	These settings allow you to give priority to data that is sent over the network. Important! You must make arrangements with your DSL provider to use anything except UBR (Unspecified Bit Rate) in the Traffic Class setting. Your service provider will also supply you with the Cell, Burst, and Tolerance Rates.
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After you enter your values, click **Apply/Save**.

Changing Your WAN Settings

The **WAN Service** page of the ADSL Modem/Router Configuration Manager is used to setup a WAN interface for your DSL connection. To set up a DSL connection you first setup the **ATM interface** as described above, and then you configure the **WAN Service** for that ATM interface. Most users should use the Home page to setup their DSL connections, the Home page sets up both the ATM and WAN layers at the same time. To go to the **WAN Service** page, on the left hand menu click **Advanced Setup** then click **WAN Service**.

To Edit a Previous Configuration:

If you already created a configuration, you can click **Edit** to make changes to that configuration. Then use the **Next** and **Back** buttons to navigate through a series of pages where you can make changes to advanced parameters such as the NAT settings, IGMP Multicast, and WAN Service.

To Add a New Configuration:

If you want to add a new configuration from this page, start by clicking **Add**. Then use the **Next** and **Back** buttons to navigate through a series of pages where you can make changes to advanced parameters such as the NAT settings, IGMP Multicast, and WAN Service. Most users should only add a new configuration if they were instructed by their service provider to do so.

Once you have made the changes you want on the first section, click on **Next** to proceed to the following section. Repeat this until you reach the **WAN Setup – Summary** page. Then click the **Apply/Save** button.

The following table describes the settings on the **WAN Configuration** pages and the values that you can enter. The settings displayed on the page will vary according to the protocol you are using.

Setting	Description
WAN Service Type	Your Internet Service Provider supplies this value.
Service Description	This is the name assigned to the wan service. Most users should accept the default name.
Network Protocol Selection	If your Service provider is using IPv6 they may ask you to select IPv6 or IPv4&IPv6 Dual stack.
PPP Username	Your DSL provider supplies this PPP User Name when you sign up for ADSL service.
PPP Password	Your DSL provider supplies this PPP password when you sign up for ADSL service.
PPPoE Service Name	This is an optional setting. Most users can leave this field blank.
Authentication Method	If configured for PPP it is the method used to authenticate your PPP connection. Most user should leave the default setting of Auto.
MTU	Maximum Transmission Unit. Largest physical packet size, measured in bytes, that the modem can send. Any messages larger than the MTU have to be fragmented before being sent.
NAT	Network Address Translation. By default, this setting is Enabled . NAT keeps a table of individual private IP addresses in your network and refers to the table when incoming requests are made. If no matches are found, the incoming data cannot come into your network. An Enabled setting keeps your IP addresses hidden from outside users.
Enable Firewall	Uncheck if you want to turn off your Firewall. Most users should leave the firewall enabled.
Dial on Demand	If enabled will disconnect your PPP connection if the connection is inactive for the amount of time

	specified in the Inactivity Timeout field.
Use Static IPv4 Address	If your service provider instructs you to use a static IP address for your PPP connection check this box and enter the IP address in the IPv4 Address field.

After you enter your values, click **Apply/Save**.

Changing Your LAN Settings

When would I need to change my LAN settings?

DHCP (**D**ynamic **H**ost **C**onfiguration **P**rotocol) is a protocol that enables your modem to manage the assignment of IP addresses to computers and devices on your Ethernet (LAN) network. DHCP is enabled by default on the ADSL Modem/Router. Enabling DHCP on the ADSL Modem/Router allows it to assign temporary IP addresses to your computers whenever they connect to your network. You can control the amount of time that lapses before a new address is issued or renewed. You can extend the range of IP addresses that are assigned to your network devices should you add new devices to your network. You can also change the default LAN IP address for your modem.

The following table shows you the values to enter. After you enter the values, click **Apply/Save**.

Setting	Description
Group Name	Default
IP Address	The IP address of your modem.
Subnet Mask	The modem's subnet mask address.
Enable IGMP Snooping	Check/uncheck to Enable/Disable the IGMP Snooping feature. This feature is designed to prevent hosts on a local network from receiving traffic for a multicast group they have not explicitly joined. Snooping is specifically useful for bandwidth-intensive IP multicast applications like IPTV. Most users can leave the default setting.
DHCP Server	Click Disable to turn off the DHCP Server. Click Enable to turn on the DHCP Server. Most users should leave this Enabled. When the DHCP Server is enabled the ADSL Modem/Router will assign IP

	addresses to devices on your network.
Start IP Address	The first IP address of a range that you specify using the Start and End IP Address settings. Your modem's DHCP server will assign the IP addresses in this range at random to the computers and devices in your network.
End IP Address	The last IP address of a range that you specify using the Start and End IP Address settings. Your modem's DHCP server will assign numbers from this range at random to the computers and devices in your network.
Leased Time (hour)	The maximum amount of time, in hours, that a device in your network will have the IP address before a new one is issued by the modem's DHCP server.

The checkbox **Configure the second IP Address and Subnet Mask for LAN interface** allows you to configure a second network on the LAN side.

Configuring a DHCP Static IP Address

A DHCP Static IP Address is used if you want the modem to always assign the same IP address to a computer or gaming device. You would want to do this if you were setting up a virtual server or DMZ using this device.

To set up a device with DHCP Static IP Address:

- 1 Click **Advanced Setup** → **LAN** to open the LAN page.
- 2 Click on **Add Entries**.
- 3 Enter the **MAC Address** of the computer or gaming station that you wish to assign a fixed IP address to.
Tip: To find the MAC address of the devices connected to your ADSL Modem/Router refer to the **DHCP Leases** table. To view the DHCP Leases table, on the left hand menu click **Device Info** then **DHCP**.
- 4 Enter the IP address that you always want assigned to your computer or gaming station. This address can be the one already given to it on the **DHCP Status** page or can be an unused IP address. For example if none of the devices on the **DHCP Status** page have been assigned 192.168.1.25 you can use that as the IP address.

- 5 Click **Apply/Save** to store your settings.

You can remove entries by clicking on **Remove Entries**. Click **Apply/Save**.

Creating a Virtual Server, a DMZ, or Using Port Triggering

Do I need to create a virtual server, DMZ, or use Port Triggering?

By default, your modem uses Network Address Translation (NAT) to hide your computers from users on the Internet. However, there may be times when you want to allow access by outside users to a computer or gaming station on your network. For instance, you would want to allow access if a computer in your network is hosting Internet games or running a web server. If you wish to set up your ADSL Modem/Router for online gaming you should refer to [Chapter 5: Online Gaming](#) to help you decide whether a Virtual Server, DMZ or Port Triggering is right for you.

Creating a Virtual Server

Before starting this section, you should specify a fixed DHCP address for the computer or gaming station that you want to use with the virtual server.

- 1 Click **Advanced Setup**→ **NAT**→ **Virtual Servers**→ **Add** to open the **Add Virtual Servers** page.
- 2 For the server name, check the list of predefined games and applications to see if yours is on the list. If it is, select it. You will need to enter the IP address of your computer or gaming station in the **Server IP Address** field, but the rest of the information will be filled out for you.
- 3 Click **Apply/Save** to save your new virtual server.
- 4 If your game or application was not on the list continue to step 5 to create a custom Virtual Server.
- 5 Enter a **Custom Server** name for your virtual server.
- 6 Enter the IP address on the computer or game station that you want to use the virtual server with in the **Server IP Address** field.

- 7 For each range of ports you need to open up enter the Starting and Ending **External Ports** and the **Protocol** used. Your game documentation should provide you with this information.
- 8 If you only need to open one port, enter that port number in both the Start and End **External Port** fields.
- 9 Once you enter the External Ports, the Internal Port fields will automatically be set to the same values. The Internal ports cannot be changed.
- 10 Click **Apply/Save** to save your new virtual server.

Setting up a DMZ

Use this page to designate a computer or gaming station on the Local Area Network as a DMZ (**De**militarized **Z**one). When you set up a DMZ for a computer, all ports on that computer are opened up to all Internet traffic – the computer is no longer protected by the ADSL Modem/Router's NAT firewall. Caution should be used when setting up a computer with a DMZ. A game station does not have the same security issues as your computer, so setting up a DMZ works normally well with your game station.

You may want to create a DMZ if a computer in your network is acting as a web server or hosting Internet games.

You need to manually assign an IP address to the DMZ. Please refer to [Configuring a DHCP Fixed IP Address](#) for instructions on how to manually assign an IP address to the DMZ.

DMZ Host IP Address: Enter the IP address of the computer or gaming station designated as a DMZ.

Note: You need to give your LAN PC clients a fixed/static IP address for DMZ to work properly. To do this, go to [Configuring DHCP Fixed IP Address](#) on page 49.

Click **Apply/Save**.

Using Port Triggering

Port triggering allows a host machine to dynamically forward a specific port back to itself and is a way to automate port forwarding. When traffic is seen on an outgoing port any traffic received on the corresponding incoming port will be forwarded to your computer or gaming station.

To set up port triggering, follow the instructions below.

- 1 Click **Advanced Setup**→ **NAT**→ **Port Triggering**.
- 2 Click **Add** to add a new Port Triggering rule.
- 3 Check the drop down list next to **Select an application**. If your game or application is listed, go ahead and select it.
- 4 Click **Apply/Save**.
If your game or application is not listed, enter a **Custom Name** for your port triggering rule and go to step 5.
- 5 Enter the Start and End **Trigger Ports** in the text fields. Your games documentation should supply you with this information.
- 6 Select the **Protocol** for the Trigger Protocol from the drop-down menu.
- 7 Enter the Start and End **Open Ports** in the text fields.
- 8 Select the **Open Protocol** from the drop-down menu.
- 9 Repeat steps 5-8 for each range of ports you want to trigger open ports with. When you are finished go to step 10.
- 10 Click **Apply/Save**.

Note: To delete a previously created Trigger Port, click the checkbox of the Trigger Port in the Trigger Port list and click **Delete**. Then click **Apply** to save your settings.

Using IP Filters

Use the **IP Filter Configuration** page to set up IP filters to **block outgoing** or **allow incoming** traffic into your computer from the Internet. To open this page, click **Advanced Setup** → **Security**. Then click on **IP Filtering**. Select **Outgoing** or **Incoming** depending on which type of filter you want to set up.

Outgoing IP Filtering Setup:

By default, all outgoing IP traffic from LAN is allowed, but some IP traffic can be blocked by setting up filters. Choose **Add** or **Remove** to configure outgoing IP filters. Once you have set up the IP filters you want, click the **Apply/Save** button.

Incoming IP Filtering Setup:

By default, all incoming IP traffic from the WAN is blocked when the firewall is enabled. However, some IP traffic can be accepted by setting up filters.

To filter Internet traffic, you must define one or more rules (that is, criteria you want the information to meet before it can proceed). As information comes in from the Internet,

the ADSL Modem/Router examines it and—if it meets the rule—the information moves forward to its destination on your computer or network. If it does not, it is discarded.

The rule can be based on many characteristics, including the network or Internet protocol it carries, the source IP address, the port that the traffic is coming in on, and so forth.

Choose **Add** or **Remove** to configure incoming IP filters. Once you have set up the IP filters you want, click the **Apply/Save** button.

Using MAC Filtering

Use the **MAC Filter Configuration** page to block a device from accessing the Internet. To open this page, click **Advanced Setup → Security**. Then click on **MAC Filtering**. Select **ADD** to add the MAC address of the device you wish to prevent from accessing the Internet. If you do not know the MAC address Click on **Device Info → DHCP** for a list of devices and their MAC address that are connected to your ADSL Modem/Router.

Setting Up Time Restrictions

Do I need time restrictions?

Time restrictions can be used to prevent a user from accessing the Internet during certain hours. For example you can use Time Restrictions to block a child from accessing the Internet until you are home.

To open this page, click **Advanced Setup → Parental Control**. Then click on **Time Restrictions**. Click **Add** to add a new Time Restriction.

The following table describes the Time Restriction settings.

Setting	Description
User Name	The name you wish to give this rule.
Browser's MAC Address	Enter the MAC Address of the computer you wish to block. To find the MAC address of the devices connected to your ADSL Modem/Router, in the left hand menu click Device Info then DHCP .
Days of the	Select the days of the week that you wish to block

Week	access on.
Start Blocking Time	Enter the starting time that you wish to block access.
Stop Blocking Time	Enter the time that you wish to block access until.
Remove	Click Remove to remove an entry.

Setting Up a Static Routing Table

Do I need static routing?

Most users do not need to set up static routes. The default route used in your modem will forward all packets correctly. However, if you set up your network with different subnets, you can use static routing to ensure your packets are handled correctly.

You can manually create a static route to tell the modem how to reach a specific IP network. The route entry specifies a destination network (or single host), together with a mask to indicate what range of addresses the network covers, and a next-hop gateway address or interface. If there is a choice of routes for a destination, the route with the most specific mask is chosen.

To route to a destination that is not on any local network, a route may be added via a gateway, for instance another router. The gateway IP address must be on the same subnet as one of the router's interfaces.

Click **Routing** from the left-side menu of the Zoom Configuration Manager. Click **Static Route**. Click **Add**.

The following table describes Routing Table settings.

Setting	Description
IP Version	Select IPv4 or IPv6.
Destination IP address / prefix length	Enter the Destination Network Address.
Interface	You can make a selection from the drop-down menu.
Gateway IP	Enter the Gateway IP address of your destination's subnet. The HOP gateway must be on the same

Address	subnet as the modem.
Metric	The number of routers that the data packets go through (optional). When adding a static route, if you know how many “hops” or “routers” a packet must go through to reach the destination network, then you can add it. This is usually not a mandatory requirement.

If you change any of the settings, click **Apply/Save**.

If you want to remove any of the settings, click the check box next to **Remove** and then click the **Remove** button.

Adding a DNS Server Name

Do I need to add a DNS server name?

Typically you should not need to enter a DNS server name as it is assigned automatically when your connection is established. However, your ISP may instruct you to enter an **IP address** for a **DNS server name**. To do this, follow the instructions below:

- 1 Check the box **Use the Following Static DNS IP Address**.
- 2 In the **Primary DNS Server** and **Secondary DNS Server** text boxes, enter the IP addresses of the DNS servers that your ISP instructed you to enter.
- 3 Click **Apply/Save**.

Using the ADSL Settings

Do I need to change my ADSL settings?

Typically you should not change your ADSL settings unless you are instructed to do so by your service provider. Or, if you are having problems establishing a physical layer connection, you may want to change a couple of the settings on the **DSL** page.

Click **DSL** under **Advanced Setup** from the left-side menu of the Zoom Configuration Manager.

Setting	Description
BitSwap	Enables or disables bit swapping in both upstream and downstream directions. If you experience frequent connection drops, it may help to change the bit swap settings.

After you enter the values, click **Apply/Save**.

Click on **Advanced Settings** only if you want to configure DSL Advanced Settings. Most users will not need to do this.

Enabling or Disabling UPnP

Universal Plug and Play (UPnP) with **Internet Gateway Device (IGD)** protocol is installed in ADSL Modem/Router units when they are shipped by Zoom. This means that other devices plugged into your computer or network (for example, a gaming application, router, or stand-alone firewall) that use UPnP should automatically detect the ADSL Modem/Router and make the needed configurations for them to work together. There is no setup for you to do. Change this setting only if you have a good reason to do so.

To change the status of Universal Plug and Play, go to the **LAN** page under the **Advanced Setup** link.

Setting	Description
Enable UPnP	Select this check box to enable or disable Universal Plug and Play . By default UPnP is enabled.

Click **Apply/Save**.

8

Management and Diagnostics

Please read this chapter if you want to perform modem management functions as discussed below, or if you want to run diagnostics to diagnose a modem problem. If you don't want to do either of these things, your modem is probably set up and ready to go. You may want to read [Appendix C: Top and Back Panels](#) on page 77, for details about the modem's lights and back panel jacks.

The information in this chapter applies to you if you wish to:

- *Backup your current settings of the ADSL Modem/Router, so you can later restore them.*
- *Restore the ADSL Modem/Router to its factory default settings.*
- *Change the username and password that you use to access your ADSL Modem/Router.*
- *Provide your service provider remote access to your ADSL Modem/Router for troubleshooting purposes.*

Management Buttons

The buttons in the **Management** group of the Zoom Configuration Manager are typically used for administrative tasks, such as upgrading firmware, changing your **Zoom Configuration Manager** password, etc. To configure management features, you need to log into the **Zoom Configuration Manager**. Follow the instructions below:

- 1 Open the Zoom Configuration Manager by typing the following in your Web browser's address bar: **http://192.168.1.1**
- 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **Login**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

- 3 Click **Advanced** on the right side of the home page.
- 4 Next click **Advanced Setup** on the left-side menu.

The following table lists each button in the **Management** group and gives a brief description of the settings you can specify.

Open page from...	This button...	Opens a page that lets you...
Management → Settings	Backup	Save your current configuration settings to a file so that they may be restored at a later time.
	Restore Backup	Upload your previously saved settings.
Management	System Log	View data generated or acquired by routine system communication with other devices. This information does not necessarily represent unexpected or improper functioning and is not captured by the system traps that create alarms. You can save the system

		log to a file.
Management	SNMP Agent	Access the SNMP – configuration page. Simple Network Management Protocol (SNMP) allows a management application to retrieve statistics and status from the SNMP agent in this device.
Management	TR-069 Client	Access to a page that allow an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to the ADSL modem. Select the desired values and click Save to configure the TR-069 client options.
Management	Internet Time	Access to a page that allows you to set up the ADSL Modem/Router to automatically synchronize with Internet time servers.
Management	Passwords	Manage the User

→ Access Control		IDs and passwords that can access the Zoom Configuration Manager . This is where you can change the default password supplied to you with the ADSL Modem/Router.
Management → Access Control	Access Setting	A Service Control List (“SCL”) enables or disables router services (for LAN / WAN such as FTP, HTTP, ICMP, and TELNET) from being used.
Management	Update Firmware	Specify the path to the upgrade file you need to update your firmware. Use the Browse button on this page to navigate to the file, then click the Update Software button to perform the firmware update.
Management	Reboot	Click the Reboot button on the Reboot page to reboot the modem.

Backing Up Your Configuration

Users who change the Configuration Manager settings for the ADSL Modem/Router may want to back up their settings. This will enable them to restore those settings at a later time, if needed.

This feature may be especially useful when you receive firmware updates from Zoom. Installing the update may overwrite your customized settings with default values. Before you update the firmware, backup your configuration. Then, after the firmware has been updated, restore your configuration.

To back up your current configuration

Use the **Backup** page of the Configuration Manager to save your modem's current configuration to a file on your computer.

- 1 Click on the **Management** link on the left pane of the window. Then click on the **Settings** link. Then click on the **Backup** link.
- 2 On the **Backup** page, click **Backup Settings** to download a configuration file from the ADSL Modem/Router to a folder on your computer.
- 3 Be sure to note the name (backupsettings.conf) and location. You will need this information if you ever want to restore the ADSL Modem/Router to this backed-up configuration. (You can change the name of the file and specify a location for it on your computer after it is downloaded.)

To restore a configuration

- 1 Click on the **Management** link on the left pane of the window in the Configuration Manager.
- 2 Then click on the **Settings** link.
- 3 Then click on the **Restore Backup** link.
- 4 On the **Update Settings** page, click **Browse** and navigate to the file containing the configuration to which you want the ADSL Modem/Router restored.
- 5 Click **Update Settings**.

Remote Access to Your Modem Configuration Settings

If you want to be able to access your modem Configuration Manager to change or view your configuration settings remotely:

- 1 Click on **Management**. Click on **Access Control**, then click on **Access Setting** and select the enable check box for **HTTP WAN** to allow access from a remote PC. Click **Apply/Save** and wait several seconds for the settings to be saved.
- 2 Click on **Device Info** from the left pane of the **Zoom Configuration Manager**. Click on **WAN**. Write down the public **IP address** displayed under **WAN Info**.
- 3 Type this public **IP address** into the browser of your remote PC.
- 4 At the log in prompt, enter the User Name and Password shown below:
User Name: **support**
Password: **support**
- 5 You can now view or make changes to your modem's configuration from your remote PC.

We recommend leaving Remote access off to prevent unauthorized access to your router. If you wish to leave it on, you should change the default passwords. See **Changing User Names and Passwords** below.

Changing User Names and Passwords

Use the **Passwords** page to manage the user names and passwords that can access the **Zoom Configuration Manager**. To open this page, click **Management → Access Control → Passwords**.

When you installed the ADSL Modem/Router and tried to open the **Zoom Configuration Manager**, you were prompted for a User Name and Password in order to gain access. (The default User Name and Password were supplied to you in the section [Logging into the Configuration Manager](#).)

If you want, you can change the default password. **Changing the password is not required, but as a good security measure, we recommend it.**

To change the default password

Access to your DSL modem is controlled through three user accounts: admin, support, and user.

- 1 Enter the current User Name in the textbox **User Name**

- 2 Enter the current password in the textbox **Old password**.
- 3 Choose the password you would like to replace it with (up to 16 characters without any spaces) and enter it in the textbox **New password**.
- 4 Retype the password in the textbox **Confirm password**.
- 5 Click on **Apply/Save**.

TR-069

The TR-069 option of the ADSL Modem/Router Configuration Manager opens a page where you can allow an **Access Control Server (ACS)** to control and configure your ADSL Modem/Router.

This feature must be supported by your service provider and should be enabled by you only if the provider instructs you to enable it.

- 1 Click **Management** from the left-side menu of the Zoom Configuration Manager.
- 2 Then click **TR-069 Client**.
- 3 After you make changes on the **TR-069 client – config** page, click **Save**.

Diagnostics

You can use the **Diagnostics** page of the Configuration Manager to run a series of diagnostic tests of your system software and hardware connections.

Appendix A: Troubleshooting Tips

The following are some problems you may experience and some possible solutions to remedy the situation.

Problem

I am unable to connect to the Internet.

Solution

There are several issues that could cause this problem. Check these items:

- Verify that the PWR light on the modem is on. If it is off check that the modem is plugged into a wall outlet and that the POWER button on the back of the modem is pushed in. If the light does not turn on, make sure there is power going to the outlet you are using. If the unit still doesn't work contact Zoom Technical Support. See [Appendix D](#) on page 79 for contact information.
- If you are using a wireless device, try connecting a computer directly to the ADSL Modem/Router's Ethernet ports. If a computer directly connected to the ADSL Modem/Router works, then the problem is with your wireless connections. See the [wireless troubleshooting tip](#) on page 68.
- If you cannot access the Internet with a computer directly connected to the ADSL Modem/Router's Ethernet port, check your Ethernet connection. Most computers have a power light next to the Ethernet jack to indicate the Ethernet cable is properly connected. Verify that this light is on and that the Ethernet light on the front of the ADSL Modem/Router is on. If the Ethernet light is off on either the ADSL Modem/Router or on the computer, verify that the cable is properly pushed in. If the light still doesn't turn on, you should try another Ethernet cable.
- Check your phone cable and splitters. Replace your phone cable with a tested working phone cable. If you have installed a splitter between the ADSL Modem/Router and the phone jack, remove this splitter. If this solves the problem you may need to replace this splitter. When testing the ADSL Modem/Router, make sure that the telephones in your house are not in use. If the problem only exists when a particular phone is in use, then you may need to install a filter on that phone; or if there is an existing filter, you should replace it.
- Try turning your computer off and then on. This ensures that your computer gets a correct IP address from the ADSL Modem/Router.
- Check your modem's DSL light.

- o If the light is blinking then the ADSL Modem/Router was unable to make a DSL connection. Go to **My ADSL Modem/Router's DSL light continually blinks and does not stay solidly lit.**
- o If the DSL Light is solid go to **My ADSL Modem/Router's DSL light is solidly lit, but I cannot connect to the Internet.**

Problem

My ADSL Modem/Router's **DSL** light continually blinks and does not stay solidly lit.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that the phone cord is firmly plugged into the wall jack and the **DSL** jack on the back of the ADSL Modem/Router.
- Verify that the jack the phone jack your ADSL Modem/Router is connected to is enabled for ADSL service. Unless your service provider has enabled it, you cannot use a standard telephone jack for ADSL service.
- Your phone cord may be defective. Replace the phone cord with a known good one.
- If your DSL modem is installed onto the same phone jack as a DSL filter, the filter may be defective. Please remove the filter from the line and plug the DSL modem into the phone jack. If this solves the problem, replace the defective filter.
- Verify that none of the phones are in use when testing the ADSL Modem/Router. If the problem appears only when you are using your phone than you either need to install a filter on that phone or if there is an existing filter you should replace it with a known working one.
- You may be having an issue with the phone wiring inside your house. Try plugging the ADSL Modem/Router into different phone jacks to see if that solves the problem. If you know where your phone line enters your house (often called the Demarc Point and is typically a gray box found either in your basement, your garage, or on the outside of the house) and you have easy access to the Demarc Point, try plugging your ADSL Modem/Router at this point. If this solves your problem you may need a professional to repair your inside phone wiring.

Problem

My ADSL Modem/Router's **DSL** light is solidly lit, but I cannot connect to the Internet.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that you are using the correct **VPI**, **VCI** and **Encapsulation** settings. If you don't know what they are, please refer to the ADSL Settings Table in [Appendix B](#).
- If your **Encapsulation** begins with **PPP**, ensure that you have typed your ADSL User Name and Password correctly. (Note that this is NOT the User Name and Password you used to log into the **Zoom Configuration Manager** on page 12.) To verify that your PPP User Name and Password are correct, login into the configuration manager.

Open the Zoom Configuration Manager by entering the following in your Web browser's address bar: <http://192.168.1.1>

In the **Login** dialog box, type the following User Name and Password in lower case, then click **OK**.

User Name: **admin**

Password: **admin**

(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)

On the left side, click **Diagnostics** to start the diagnostic test. In the **Test the Connection to your Internet Service Provider** box if the **Test PPP Server Connection** tests passes but the **Test Authentication with your ISP** test fails, then your PPP User Name and Password are wrong. If you are having problems remembering your PPP User Name and Password please see the solution to the next troubleshooting problem **My DSL connection requires a User Name and Password, but I don't know where to find this information** on page 66.

- Verizon users who are replacing an existing modem in California, Florida, or Texas may need to wait 2 hours after unplugging the existing modem for Verizon to release the line before it is available for use. If this applies to you, power down your ADSL Modem/Router and wait 2 hours before trying to connect again.
- Verify that your service provider's ADSL connection is functioning properly. (Place a call to your service provider's customer support department to verify this.)

Problem

My DSL connection requires a User Name and Password, but I don't know where to find this information.

Solution

- If you are replacing a modem, use the same User Name and Password that you used for the modem you're replacing.
- If you don't know what that is, here are some suggestions:
 - If you have an email address with the service provider like **name@verizon.net**, the User Name is likely to be the word **name** in this example. NAME will not work, since upper and lower case matter. There are some exceptions to this however. Some AT&T customers especially in old BellSouth areas have a separate network User Name and password used to verify their DSL connection. Please see the AT&T support website on how to reset your User Name and password.
 - If you have a service provider Password, that's probably your Password for Internet access too.
 - You may also be able to change your User Name and Password so that you can use the new User Name and Password with your Zoom modem. Some service providers like Verizon provide a software tool that lets you do that if your old modem is still plugged in. Many service providers allow you to change your User Name and Password on their support website in case you have forgotten this information.
- If you are not replacing a modem, you may need to use your service provider's Internet software tool or speak with the service provider to find out your User Name and Password.
- Remember that the User Name and Password are case sensitive, so it matters whether a letter is a capital letter or a small letter; so does the difference between the letter O and the number 0.
- Once you have a working User Name and Password, be sure to remember them. You may want to write them on the bottom of the ADSL Modem/Router case, for instance, and in a ModemSettings file.
- We are talking here about the User Name and Password to get into the Internet, NOT the User Name and Password used to get into your modem's configuration page.

Problem

My computer/devices are not connecting wirelessly to the ADSL Modem/Router.

Solution

Try the following:

- Check your wireless security settings on your ADSL Modem/Router and verify that your device is using the same settings.
- Check the signal strength of your wireless connection. Most wireless adapters have some type of signal strength meter that shows how strong your wireless signal is. **Windows users**, click the **Wireless** icon in your system tray to check signal strength. If your signal strength is not strong enough, try the following:
 - Reorient the receiving antenna on your ADSL Modem/Router.
 - Move the ADSL Modem/Router to another area.
 - Move the device trying to access the ADSL Modem/Router to a different location, ideally closer to the ADSL Modem/Router.
- Change the wireless channel. In the unlikely event that you experience performance issues with your wireless network, you may want to set your network up on a different channel. By default your ADSL Modem/Router is set to select the wireless channel automatically. To set it to use a specific channel, follow these steps:
 - 1 Open the Zoom Configuration Manager by entering the following in your Web browser's address bar: **http://192.168.1.1**
 - 2 In the **Login** dialog box, type the following User Name and Password in lower case, then click **OK**.

User Name: **admin**
Password: **admin**
(The User Name and Password entered here are not the same as the user name and password that your Internet service provider may have given you.)
 - 3 Click the **Advanced** button on the right side of the page.
 - 4 Click **Wireless** on the left-side menu to open the **Wireless** page.
 - 5 On the Wireless page, from the **Channel** drop-down menu, select a different channel, such as 1 or 6.
 - 6 Be sure to click **Apply/Save** after you change the channel. All devices connecting wirelessly to the ADSL Modem/Router will automatically switch to the new channel.

Problem

When I try to connect wirelessly to my ADSL Modem/Router, I don't know what Wireless Network I should select.

Solution

The Wireless Network Name(SSID) is printed on the bottom label of your ADSL Modem/Router. Select this name to connect to the ADSL Modem/Router.

Problem

When trying to connect a computer or device wirelessly to my ADSL Modem/Router I am being asked for a Wireless Security Key or Password.

Solution

The default Wireless Security Key is printed on the bottom label of your ADSL Modem/Router

Problem

I cannot log into the **Zoom Configuration Manager**. I have typed **http://192.168.1.1** but I am not prompted for a **User Name** and **Password**.

Solution

There are several issues that could cause this problem. Check these items:

- If you are using Mac OS X 10.3 and above, renew your IP address: Point to **System Preferences**, then choose **Network**. Click the **Configure** button and then the **Renew DHCP Lease** button.
- If you are using a Windows computer, power off your computer, then power it back on.

Problem

The computer on which I initially installed the ADSL Modem/Router on is connected to the Web, but devices connected wirelessly to the ADSL Modem/Router are unable to connect to the Internet.

Solution

- Try powering off then powering on each device on your network.
- Verify that the devices on your wireless network are using Dynamic Host Configuration Protocol (DHCP). This is also known as dynamic IP addressing. Depending on your device, this may be controlled by an **Obtain an IP address automatically** option. If you need help, refer to the documentation that came with your network device or contact its manufacturer.
- Your problem might be in the wireless connection. Try the steps in [My computer/devices are not connecting wirelessly to the ADSL Modem/Router](#) troubleshooting tip on page 68.

Problem

The computer on which I initially installed the ADSL Modem/Router on is connected to the Web, but the computers connected through my network device cannot access the Internet.

Solution

The problem is most likely with your network device (such as a wireless access point, router, hub, or switch). Check these items:

- Try rebooting each computer on your network. For example, if you are using a router, reboot each computer that is connected to the router. This will allow for the computers to release and renew their IP addresses.
- If you are using a wireless access point or a router, verify that the device is using Dynamic Host Configuration Protocol (DHCP). This is also known as dynamic IP addressing. Depending on your device, this may be controlled by an **Obtain an IP address automatically** option. If you need help, refer to the documentation that came with your network device or contact its manufacturer.
- Refer to the documentation provided with your network device or contact its manufacturer for assistance.

Appendix B: ADSL Internet Settings Tables

These tables are for customers where ADSL settings were not automatically detected by the ADSL Modem/Router Install Assistant, and whose service providers do not supply them with the ADSL settings to connect to the Internet. Many ADSL providers use different settings depending on the region in which they are operating, which is why there may be more than one setting for your service provider. We post updated tables on our Web site. If your country is not listed in the tables below, please consult www.zoomtel.com

Note to USA customers

If your ADSL service provider is not shown below, first use the settings for **Service Provider Not Shown** at the bottom of the table. If those settings do not work, use the settings for the company that provides local telephone service in your area.

Table A: USA

ISP	VPI	VCI	Encapsulation
All Tel (1)	0	35	PPPoE LLC
All Tel (2)	0	35	1483 Bridged IP LLC
AT&T (1)	0	35	PPPoE LLC
AT&T (2)	8	35	1483 Bridged IP LLC
AT&T (3)	0	35	1483 Bridged IP LLC
August.net (1)	8	35	1483 Bridged IP LLC
August.net (2)	0	35	1483 Bridged IP LLC
BellSouth	8	35	PPPoE LLC
Castle.Net	0	96	1483 Bridged IP LLC
CenturyTel (1)	8	35	PPPoE LLC
CenturyTel (2)	8	35	1483 Bridged IP LLC
Coqui.net	0	35	PPPoA LLC
Covad	0	35	PPPoE LLC
Crocker Communications	0	35	PPPoE LLC

Earthlink (1)	0	35	PPPoE LLC
Earthlink (2)	8	35	PPPoE LLC
Earthlink (3)	8	35	PPPoE VC-MUX
Earthlink (4)	0	32	PPPoA LLC
Eastex	0	100	PPPoA LLC
Embarq	8	35	1483 Bridged IP LLC
4DV.net	0	32	PPPoA VC-MUX
Frontier	0	35	PPPoE LLC
Grande Communications	1	34	PPPoE LLC
GWI	0	35	1483 Bridged IP LLC
Hotwire	0	35	1483 Bridged IP LLC
Internet Junction	0	35	1483 Bridged IP LLC
PVT	0	35	1483 Bridged IP LLC
Qwest (1)	0	32	PPPoA VC-MUX
Qwest (2)	0	32	PPPoA LLC
Qwest (3)	0	32	PPPoE LLC
Qwest (4)	0	32	1483 Bridged IP LLC
SBC (1)	0	35	PPPoE LLC
SBC (2)	0	35	1483 Bridged IP LLC
SBC (3)	8	35	1483 Bridged IP LLC
Socket (1)	8	35	1483 Bridged IP LLC
Socket (2)	0	35	1483 Bridged IP LLC
Socket (3)	0	35	PPPoE LLC
Sonic	0	35	1483 Bridged IP LLC
SouthWestern Bell	0	35	1483 Bridged IP LLC
Sprint (1)	0	35	PPPoA LLC
Sprint (2)	8	35	PPPoE LLC

SureWest Communications (1)	0	34	1483 Bridged LLC Snap
SureWest Communications (2)	0	32	PPPoE LLC
SureWest Communications (3)	0	32	PPPoA LLC
Toast.Net	0	35	PPPoE LLC
Uniserve	0	33	1483 Bridged IP LLC
US West	0	32	PPPoA VC-MUX
Verizon (1)	0	35	PPPoE LLC
Verizon (2)	0	35	1483 Bridged IP LLC

Table B: Countries Other Than The USA

<u>ISP</u>	<u>VPI</u>	<u>VCI</u>	<u>Encapsulation</u>
Australia - Telstra	8	35	PPPoA LLC
Argentina - Telecom	0	33	PPPoE LLC
Argentina - Telefonica	8	35	PPPoE LLC
Argentina	1	33	PPPoA VC-MUX
Belgium-ADSL Office	8	35	1483 Routed IP LLC
Belgium - Turboline	8	35	PPPoA LLC
Bolivia	0	34	1483 Routed IP LLC
Brazil - Brasil Telcom	0	35	PPPoE LLC
Brazil - Telefonica	8	35	PPPoE LLC
Brazil - Telmar	0	33	PPPoE LLC
Brazil - South Region	1	32	PPPoE LLC
Colombia - EMCALI	0	33	PPPoA VC-MUX
Columbia - ETB	0	33	PPPoE LLC
Costa Rica - ICE	1	50	1483 Routed IP LLC
Denmark-Cybercity, Tiscali	0	35	PPPoA VC-MUX
France (1)	8	35	PPPoE LLC
France (2)	8	67	PPPoE LLC
France (3)	8	35	PPPoA VC-MUX
Germany	1	32	PPPoE LLC
Hungary - Sci-Network	0	35	PPPoE LLC
Iceland - Islandssimi	0	35	PPPoA VC-MUX
Iceland - Siminn	8	48	PPPoA VC-MUX
Israel	8	35	PPPoA VC-MUX
Italy	8	35	PPPoA VC-MUX
Jamaica (1)	8	35	PPPoA VC-MUX

Jamaica (2)	0	35	PPPoA VC-MUX
Jamaica (3)	8	35	1483 Bridged IP LLC SNAP
Jamaica (4)	0	35	1483 Bridged IP LLC SNAP
Kazakhstan	0	33	PPPoA VC-MUX
Mexico	8	35	PPPoE LLC
Netherlands - BBNET	0	35	PPPoA VC-MUX
Netherlands - MX Stream	8	48	PPPoA VC-MUX
New Zealand - Slingshot	0	100	PPPoA VC-MUX
Portugal	0	35	PPPoE LLC
Puerto Rico - Coqui.net	0	35	PPPoA LLC
Saudi Arabia (1)	0	33	PPPoE LLC
Saudi Arabia (2)	0	35	PPPoE LLC
Saudi Arabia (3)	0	33	1483 Bridged IP LLC
Saudi Arabia (4)	0	33	1483 Routed IP LLC
Saudi Arabia (5)	0	35	1483 Bridged IP LLC
Saudi Arabia (6)	0	35	1483 Routed IP LLC
Spain - Albura, Tiscali	1	32	PPPoA VC-MUX
Spain - Colt Telecom, Ola Internet	0	35	PPPoA VC-MUX
Spain - EresMas, Retevision	8	35	PPPoA VC-MUX
Spain - Telefonica (1)	8	32	PPPoE LLC
Spain - Telefonica (2), Terra	8	32	1483 Routed IP LLC
Spain - Wanadoo (1)	8	35	PPPoA VC-MUX
Spain - Wanadoo (2)	8	32	PPPoE LLC
Spain - Wanadoo (3)	8	32	1483 Routed IP LLC
Sweden - Telenordia	8	35	PPPoE

Sweden - Telia	8	35	1483 Routed IP LLC
Switzerland	8	35	PPPoE LLC
Trinidad & Tobago - TSTT	0	35	PPPoA VC-MUX
Turkey (1)	8	35	PPPoE LLC
Turkey (2)	8	35	PPPoA VC-MUX
United Kingdom (1)	0	38	PPPoA VC-MUX
United Kingdom (2)	0	38	PPPoE LLC
United Kingdom - AOL	0	38	PPPoE VC-MUX
United Kingdom - Karoo	1	50	PPPoA LLC
Venezuela - CANTV	0	33	1483 Routed IP LLC
Vietnam	0	35	PPPoE LLC
Vietnam - VDC	8	35	PPPoE LLC
Vietnam - Viettel	8	35	PPPoE LLC
Vietnam - FPT	0	33	PPPoE LLC

Appendix C: Top and Back Panels

The following table describes each light on the **top panel**.

Light	Description
Ethernet [1-4]	Lights when the Ethernet port of the ADSL Modem/Router is plugged into the Ethernet port of a powered-up device. Blinks when there is data activity.
DSL	Blinks when the ADSL Modem/Router is performing its startup sequence. Stays on solid when the unit has synched up with its ADSL connection. Note: If the light fails to switch from blinking to steady after a minute or two, check with your ADSL provider that the ADSL connection is activated, or refer to Appendix A: Troubleshooting Tips on page 64.
WLAN	Lights when the Wireless Local Area Network is running and enabled. Blinks when data is sent.
SYS	Blinks when the router is operating normally
WPS	Blinks when in WPS mode.
PWR	Lights when the ADSL Modem/Router is plugged into a power source and the Power button on the ADSL Modem/Router rear panel is pushed in.
Internet	Blinks when data is sent and received.

The following table describes each item on the **back panel**.

Port	Description
DSL	Jack to connect the modem to the ADSL telephone wall jack.
Ethernet [1-4]	LAN ports that can connect the unit to access points, network hubs, or the Ethernet ports of a computer.
WPS/RST	Pressing the button for 2 seconds puts the

	ADSL Modem into WPS mode. After pressing the WPS button, click or press the WPS button on the client device. This button may be a physical button on the unit or a software button in its application. Refer to your client device's documentation for further instructions, if necessary. Pressing the button for 8 seconds restores the default IP Address (192.168.1.1), User Name (admin), and Password (Admin) for the ADSL Modem/Router.
PWR	Port to connect the unit to the ADSL Modem/Router's power cube.
ON/OFF	Button when pressed once turns the modem's power ON. When pressed again turns the modem's power OFF.

Appendix D: Getting Help

Zoom has many Technical Support services available to its customers.

- **To Register Your Product Or Get Assistance**

We can support you best if you register your product at **www.zoomtel.com/register**

We have many ways to assist you, and you can see them at **www.zoomtel.com/techsupport**

From here, you can send email to our technical support experts and/or do a smart search through our intelligent database by using **SmartFacts™**.

Tip:

From time to time, Zoom may release improved firmware. This is also available at **www.zoomtel.com**, along with upgrade instructions. We recommend that you check our Web site periodically for updates.

You can reach Technical Support by calling these numbers:

In the United States, call **(617) 753-0961**.

In the UK, call

London: **+44 2033180660** or

Manchester: **+44 1618840074**

- Some retailers of Zoom products provide support or can recommend a convenient support center.

Appendix E: Regulatory Information



Declaration of Conformity Declaración de conformidad

Manufacturer/Fabricante	Zoom Telephonics, Inc. 207 South Street Boston, MA 02111 USA 617-423-1072 www.zoomtel.com
Brand/Marca	Zoom ADSL Modem/Router w/ Wireless-N
Type/Tipo	Series 1108 Model 5792XY (where X=A,B,C,D,E,F or nothing and Y=G,H,J,K,L,M or nothing)

The manufacturer declares under sole responsibility that this equipment is compliant to Directive 1999/5/EC via the following. This product is CE marked.

El fabricante declara bajo su exclusiva responsabilidad que este equipo satisface la Directiva 1999/5/EC por medio de lo siguiente. Este producto tiene marca CE.

73/23/EEC – LVD	EN60950-:2006+A11:2009+A1:2010+A12:2011
89/336/EEC – EMC/EMF	EN301 489-1 V1.9.1 (2011-09) EN301 489-17 V2.2.1 (2012-09) EN62311:2008
1999/5/EC	EN300 328 v1.7.1:2006-10

Paul Prohodoski
7 July 2014
1084/TF, Boston, MA, USA

Director, Hardware Engineering/
Director. Ingeniería de apoyo



Regulatory Notices for ADSL Modem/Router with Wireless-N (Regulatory Notices also apply to ADSL Splitter Model TD-1301)

CE Mark Warning

This is a class B product in a domestic environment; this product may cause radio interference, in which case the user may be required to take adequate measures. This device complies with EU 1999/5/EC.

Note: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.

U.S. FCC Part 68 /TIA-968-A Statement

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. The unit bears a label on the back which contains among other information a product identifier in the format US:BDNDL01B1108. If requested, this number must be provided to the telephone company.

This equipment uses the following standard jack types for network connection: RJ11C.

This equipment contains an FCC compliant modular jack. It is designed to be connected to the telephone network or premises wiring using compatible modular plugs and cabling which comply with the requirements of FCC Part 68 rules. The Ringer Equivalence Number, or REN, is used to determine the number of devices which may be connected to the telephone line. An excessive REN may cause the equipment to not ring in response to an incoming call. In most areas, the sum of the RENs of all equipment on a line should not exceed five (5.0).

In the unlikely event that this equipment causes harm to the telephone network, the telephone company can temporarily disconnect your service. The telephone company will try to warn you in advance of any such disconnection, but if advance notice isn't practical, it may disconnect the service first and notify you as soon as possible afterwards. In the event such a disconnection is deemed necessary, you will be advised of your right to file a complaint with the FCC.

From time to time, the telephone company may make changes in its facilities, equipment, or operations which could affect the operation of this equipment. If this occurs, the telephone company is required to provide you with advance notice so you can make the modifications necessary to obtain uninterrupted service.

There are no user serviceable components within this equipment. See Warranty flyer for repair or warranty information.

It shall be unlawful for any person within the United States to use a computer or other electronic device to send any message via a telephone facsimile unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or of such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long distance transmission charges. Telephone facsimile machines manufactured on and after December 20, 1992, must clearly mark such identifying information on each transmitted message. Facsimile modem boards manufactured on and after December 13, 1995, must comply with the requirements of this section.

This equipment cannot be used on public coin phone service provided by the telephone company.

If trouble is experienced with this equipment, for repair or warranty information, please contact: Zoom Telephonics, Inc. 207 South Street, Boston, MA 02111, USA, (617) 753-0961. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to Party Line Service is subject to state tariffs. Contact your state public utility commission, public service commission, or corporation commission for more information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

WHEN PROGRAMMING EMERGENCY NUMBERS AND/OR MAKING TEST CALLS TO EMERGENCY NUMBERS:

- 1) Remain on the line and briefly explain to the dispatcher the reason for the call.
- 2) Perform such activities in the off-peak hours, such as early morning or late evenings.

U.S. FCC Part 15 Emissions Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.

Industry Canada Emissions Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

RSS-GEN, Sec. 7.1.3 – (licence-exempt radio apparatus)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IMPORTANT NOTE: (For mobile device use)

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

NOTE IMPORTANTE: (Pour l'utilisation de dispositifs mobiles)

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Industry Canada CS03 Statement

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of concern. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

"NOTICE: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment."

« AVIS : Le présent matériel est conforme aux spécifications techniques d'Industrie Canada applicables au matériel terminal. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique que les spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pas qu'Industrie Canada a approuvé le matériel. »

European Declaration of Conformity

The manufacturer declares under sole responsibility that this equipment is compliant to Directive 1999/5/EC (R&TTE Directive) via the following. This product is CE Marked.

Directive	Standard	Test Report
73/23/EEC-Low Voltage	EN60950-1:2006+A11:2009+A1:2010+A12:2011	Electrical safety
89/336/EEC-EMC	EN301 489-1 V1.9.1 (2011-09)	EMC-immunity
	EN301 489-17 V2.2.1 (2012-09)	EMC-emissions
	EN62311:2008	

Electrostatic Discharge Statement

The unit may require resetting after a severe electrostatic discharge event.

Note: If you do not use the supplied phone cord, use an equivalent of minimum AWG 26 line cord.

CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN 60950-1: 2006 + A11:2009+A1:2010+A12:2011
Safety of Information Technology Equipment
- EN62311:2008
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields
- EN 300 328 V1.7.1: (2006-10)
- Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.9.1: (2011-09)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V2.2.1 (2012-09)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France

CE 0678

[cs] Česky [Czech]	Zoom Telephonics, Inc. tímto prohlašuje, že tento Zoom ADSL Modem/Router w/ Wireless-N je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
[da] Dansk [Danish]	Undertegnede Zoom Telephonics, Inc. erklærer herved, at følgende udstyr Zoom ADSL Modem/Router w/ Wireless-N overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
[de] Deutsch [German]	Hiermit erkläre Zoom Telephonics, Inc., dass sich das Gerät Zoom ADSL Modem/Router w/ Wireless-N in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
[et] Eesti [Estonian]	Käesolevaga kinnitab Zoom Telephonics, Inc. seadme Zoom ADSL Modem/Router w/ Wireless-N vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[en] English	Hereby, Zoom Telephonics, Inc., declares that this Zoom ADSL Modem/Router w/ Wireless-N is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
[es] Español [Spanish]	Por medio de la presente Zoom Telephonics, Inc. declara que el Zoom ADSL Modem/Router w/ Wireless-N cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
[el] Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Zoom Telephonics, Inc. ΔΗΛΩΝΕΙ ΟΤΙ Zoom ADSL Modem/Router w/ Wireless-N ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.
[fr] Français [French]	Par la présente Zoom Telephonics, Inc. déclare que l'appareil Zoom ADSL Modem/Router w/ Wireless-N est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
[it] Italiano [Italian]	Con la presente Zoom Telephonics, Inc. dichiara che questo Zoom ADSL Modem/Router w/ Wireless-N è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo Zoom Telephonics, Inc. deklarē, ka Zoom ADSL Modem/Router w/ Wireless-N atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo Zoom Telephonics, Inc. deklaruoja, kad šis Zoom ADSL Modem/Router w/ Wireless-N atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
[nl] Nederlands [Dutch]	Hierbij verklaart Zoom Telephonics, Inc. dat het toestel Zoom ADSL Modem/Router w/ Wireless-N in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
[mt] Malti [Maltese]	Hawnhekk, Zoom ADSL Modem/Router w/ Wireless-N, jiddikjara li dan Zoom Telephonics, Inc. jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
[hu] Magyar [Hungarian]	Alulírott, Zoom Telephonics, Inc. nyilatkozom, hogy a Zoom ADSL Modem/Router w/ Wireless-N megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
[pl] Polski [Polish]	Niniejszym Zoom Telephonics, Inc. oświadcza, że Zoom ADSL Modem/Router w/ Wireless-N jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
[pt] Português [Portuguese]	Zoom Telephonics, Inc. declara que este Zoom ADSL Modem/Router w/ Wireless-N está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
[sl] Slovensko [Slovenian]	Zoom Telephonics, Inc. izjavlja, da je ta Zoom ADSL Modem/Router w/ Wireless-N v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky	Zoom Telephonics, Inc. týmto vyhlasuje, že Zoom ADSL Modem/Router w/ Wireless-N spĺňa

[Slovak]	základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
 Suomi [Finnish]	Zoom Telephonics, Inc. vakuuttaa täten että Zoom ADSL Modem/Router w/ Wireless-N tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
 Svenska [Swedish]	Härmed intygar Zoom Telephonics, Inc. att denna Zoom ADSL Modem/Router w/ Wireless-N står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Compliance Model Identification

	Model name	Product name
FCC 15C, FCC 15B, FCC 68	Zoom ADSL Modem/Router w/ Wireless-N	SERIES 1108 MODEL 5792XY WHERE X=A,B,C,D,E,F OR NOTHING AND Y=G,H,J,K,L,M OR NOTHING
IC , ICES-003, CS-03	Zoom ADSL Modem/Router w/ Wireless-N	Series 1108 Model 5792
CE0678 !	Zoom ADSL Modem/Router w/ Wireless-N	Series 1108
FCC Part 68 ID	BDNDL01B1108	
FCC ID	V7TD151	
IC ID	1535A-1108	